



Context Sensitive Design at WSDOT

By

Samih Shilbayeh

Safety Research Engineer

HQ Design Office

Tel (360) 705-7264

Questions?

- ◆ What is Context Sensitive Design (CSD)?
- ◆ Why is CSD necessary?
- ◆ What is WSDOT's doing with CSD?
- ◆ How does CSD affect Design Standards?
- ◆ What does CSD mean to You?

What is Context Sensitive Design?

Other names

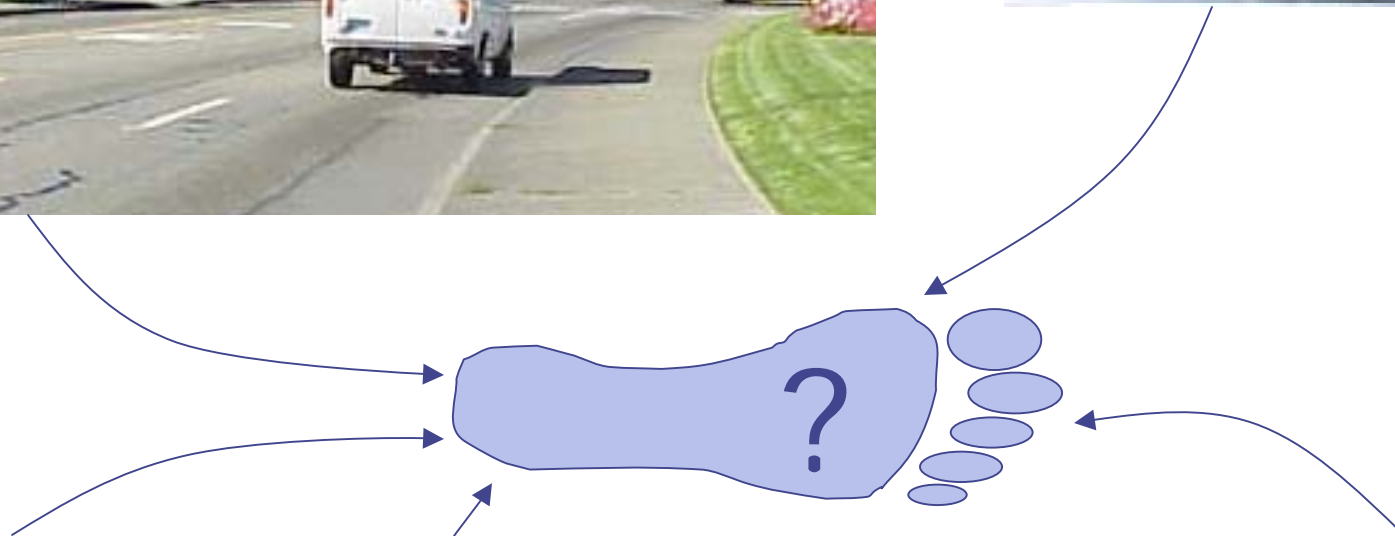
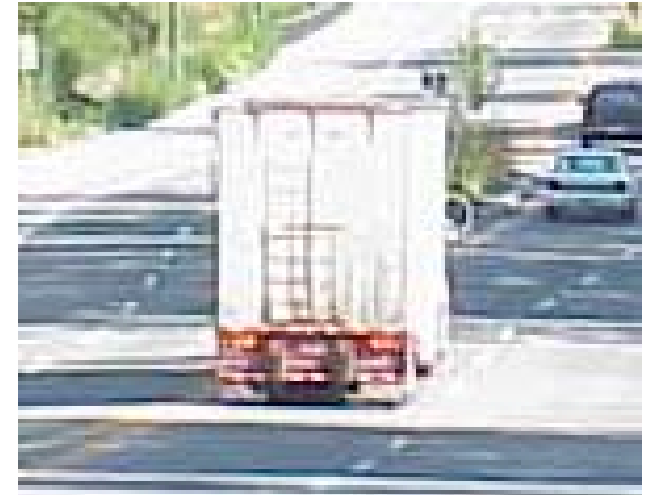
- ◆ Context Sensitive Solutions
- ◆ Flexibility in Highway Design
- ◆ Thinking Beyond the Pavement
- ◆ Place Sensitive Design

All of these terms are referring to the same principle



Contexts are highly variable





Context Sensitive Design

Context Sensitive Design asks questions first about the need and purpose of the transportation project and then equally addresses safety, mobility, and the preservation of scenic, aesthetic, historic, environmental, and other community values.

Context Sensitive Design

- ◆ Context Sensitive design involves a collaborative, interdisciplinary approach in which citizens are part of the design team.
- ◆ Team members help guide the development of projects that are appropriate for the local context.

Why is CSD Necessary?

- ◆ CSD brings the experts to the table
- ◆ CSD builds community partnerships
- ◆ CSD makes the most of opportunities
- ◆ CSD yields superior designs
- ◆ CSD is national

CSD at the National Level

- ◆ FHWA's Flexibility in Highway Design
- ◆ AASHTO – A Guide for Achieving Flexibility in Highway Design
- ◆ FHWA Administrator – “We should seek to institutionalize the principles of CSD with the same commitment that drove the implementation of the Interstate Highway System”
- ◆ NCHRP Report 480
- ◆ TRB Task Force on Context Sensitive Design

What is WSDOT's Doing with CSD?

- ◆ Executive Order E 1028.00
- ◆ Community Partnership Forum
- ◆ Safety and Aesthetics in Urban Roadways Project
- ◆ Training on CSD/CSS
- ◆ Case Study Projects

Executive Order E 1028.00

- ◆ From the project's inception, work with representatives of affected communities, including elected and appointed officials and a widely representative array of interested citizens.
- ◆ Assure that transportation objectives of projects are clearly described and discussed with local communities in a process that encourages reciprocal communication about local views and needs in the overall project setting.
- ◆ Pay attention to and address community and citizen concerns.
- ◆ Ensure the project is a safe facility for both the user and the community.

Community Partnership Forum

◆ Purpose

- Identify barriers on joint projects
- Create solutions to expedite project development
- Better address local and regional needs (partnering)

◆ Products

- Building Projects that Build Communities
- Training Program
- Recommendations to Executives

Safety and Aesthetics on Urban Roadways Project

- ◆ Defined Jurisdictional Responsibilities in an Instructional Letter
- ◆ Clear Zone Supplement to the Design Manual
- ◆ In-Service Evaluation process for medians
- ◆ Urban Design Supplement to the Design Manual
- ◆ Urban Funding Matrix (in review stage)
- ◆ Understanding Flexibility in Transportation Design – Washington (in final review)
- ◆ Training

Case Study Projects

- ◆ Using various forums to show-case successful projects
 - Helps to communicate concepts
 - Illustrates the true variety of solutions
 - Illustrates potential partnerships
 - Demonstrates scalability to fit project

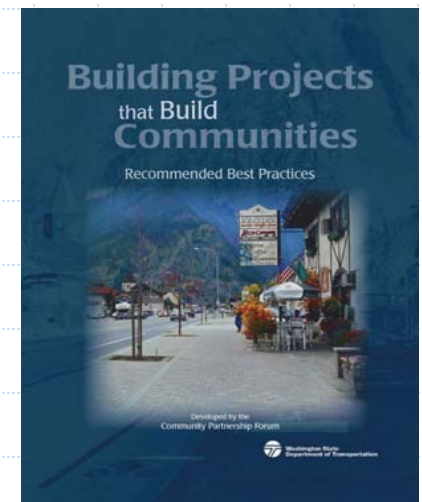
WSDOT CSD Publications

WSDOT has developed two publications
in support of the CSD approach

- ◆ Building Projects that Build Communities
- ◆ Understanding Flexibility in Transportation Design - Washington

Building Projects that Build Communities

- Published in January 2003
- Process Approach
- Team Success
- Design, Review and Approval Process
- Building Your Project
- Evaluation, Adjusting, Improving
- Case Studies
- Tools and Resources



Building Projects that Build Communities

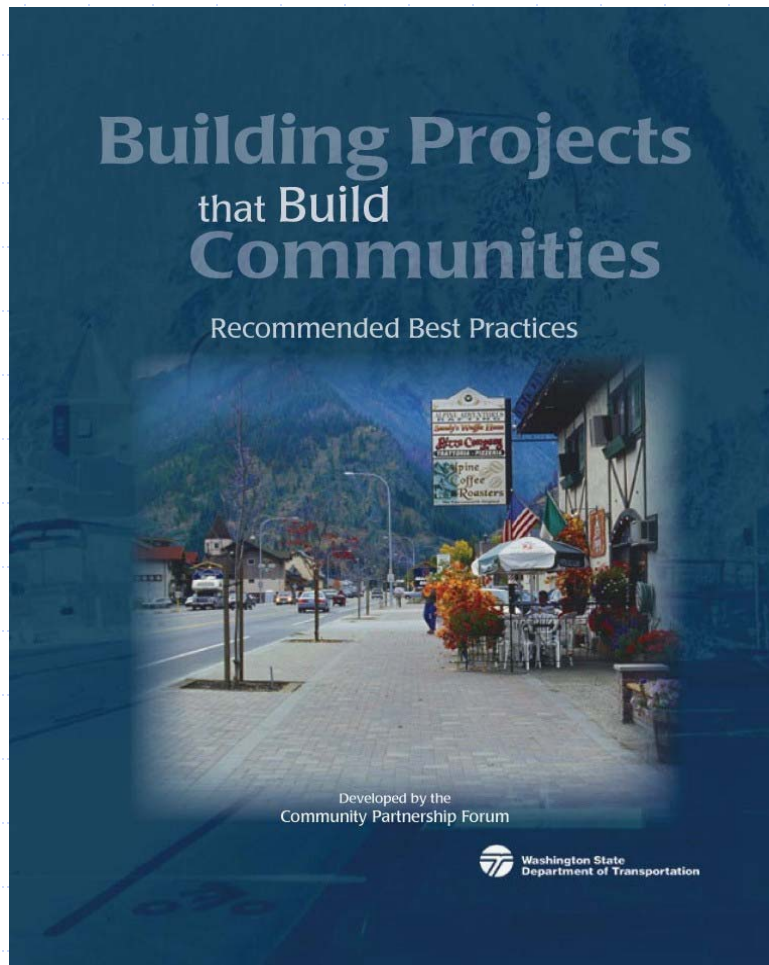


Table of Contents

1 Introduction

3 Chapter One: Using the Community Partnership Approach

- 5 Getting Started: An Overview of Joint Projects
- 6 Identifying Funding Sources
- 7 *Figure 5. Example of Best Practices: WSDOT Olympic Region Capital Improvement and Preservation Program Project List: Grays Harbor County*
- 9 Local Programs Engineers at WSDOT

13 Chapter Two: Setting the Stage for Success

- 15 Start the Team Off on the Right Foot
- 17 Meeting One: Laying It All Out on the Table
- 20 Meeting Two: Refining Your Project Vision
- 24 Meeting Three: Signing Off on the Nitty Gritty
- 27 Engage the Public in Your Project

31 Chapter Three: Working through Design, Review, and Approval

- 33 Strategies for Success
- 36 Major Milestones in the Design Process
- 37 If You Reach an Impasse: The Route to Dispute Resolution

39 Chapter Four: Building Your Project

- 39 Clarify Roles and Responsibilities

41 Chapter Five: Evaluating, Adjusting, and Improving

- 43 *Figure 12: Sample Six Month Evaluation Form*
- 45 *Figure 13: Sample End of Project Evaluation Form*

47 Chapter Six: Case Studies

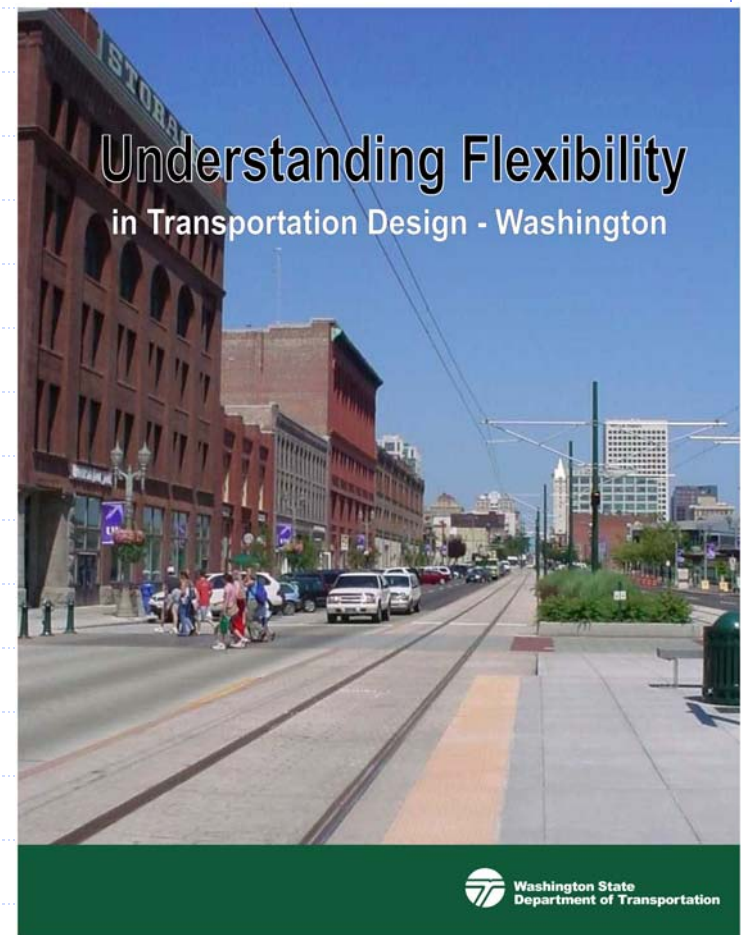
- 47 Case Study 1: Integrating an Arterial State Highway with the Community Vision—Covington
- 49 Case Study 2: State Highway meets Small Town—Bingen
- 51 Case Study 3: State Highway within a Scenic Area—The Columbia Gorge

53 Chapter Seven: Tools and Resources

- 54 A Table of Joint Project Types
- 58 Local Agency Documentation Review Checklist
- 62 WSDOT Regional Practices Example Checklists
- 62 Checklist for Channelization Plan Review
- 63 The Path to Success
- 64 Olympic Region Development Services Checklist

Understanding Flexibility in Transportation Design - WA

- ◆ Developed by a team of FHWA, WSDOT, Local Agency Governments, MPOs, AWC
- ◆ Published recently
- ◆ Presents trade-offs associated with various design elements, in various contexts



Understanding Flexibility in Transportation Design - WA

Table of Contents

Division I Introduction

- Chapter I-1 Background and Intent of Document
- Chapter I-2 Historical Perspective
- Chapter I-3 Legal Responsibility and Liability

Division II Applying the Considerations

- Chapter II-1 Considering the Various Contexts
- Chapter II-2 Defining and Creating a Sense of Place

Division III Facility Users

- Chapter III-1 Pedestrians
- Chapter III-2 Bicyclists
- Chapter III-3 Transit
- Chapter III-4 Motorized Vehicles

Division IV Environmental Considerations

- Chapter IV-1 Urban Forestry
- Chapter IV-2 Urban Streams
- Chapter IV-3 Fish, Wildlife, and Plant Resources
- Chapter IV-4 Cultural and Historic Resources
- Chapter IV-5 Air Quality
- Chapter IV-6 Noise
- Chapter IV-7 Vibration
- Chapter IV-8 Night Sky Darkness
- Chapter IV-9 Use of Recycled Materials

Division V Design Considerations

- Chapter V-1 Facility Purpose and Characteristics
- Chapter V-2 Land Use Transitions
- Chapter V-3 Roadway
- Chapter V-4 Roadside
- Chapter V-5 Intersections
- Chapter V-6 Access
- Chapter V-7 Right of Way Management and Utilities
- Chapter V-8 Parking
- Chapter V-9 Traffic Calming
- Chapter V-10 Illumination
- Chapter V-11 Visual Functions
- Chapter V-12 Streetscape Amenities
- Chapter V-13 Stormwater Management

Division VI Project Development Approach

- Chapter VI-1 Documenting the Decision-Making Process
- Chapter VI-2 Project Development and Planning
- Chapter VI-3 Environmental Partnerships

Appendix A Case Studies

Appendix B Roadside Funding Matrix - WSDOT Capital Projects

How Does CSD Affect Design Standards?

- ◆ Design Standards still apply – as always
- ◆ CSD leads to a better understanding of standards
 - Leads to a better understanding of when flexibility can be exercised
- ◆ Understanding tradeoffs is essential to informed decision making

Key Issues and Challenges



What Does CSD Mean to you?

- ◆ You are on the frontlines
 - Represent the interests of projects with communities & stakeholders
 - Have responsibilities for project delivery
- ◆ Must ensure that project concepts are buildable and fundable

CSD Training

- ◆ CSD Training (six classes) were offered
 - Funded in partnership with FHWA, WSDOT, and Local Agencies
- ◆ Currently provided under contract by CH2MHill - WSDOT Trainers Attending
- ◆ Will be presented by WSDOT Staff after the first year

How Will We Know If We Succeeded?

- ◆ We won't be talking about this approach any more
- ◆ It will be our standard way of doing business – nobody will consider it extraordinary